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E-business as a new trend in the economy

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Abstract

The modern economy is based not only on capital and human resources, but above all on information that enterprises possess. The right information at the right time may determine the development and strong competitive position of an enterprise on the market, whereas lack of such information may even lead to its failure. A properly developed e-business strategy and tools that are well suited for the specificity of this type of business and appropriately used have a positive impact on an enterprise's success.
The aim of the paper is to indicate the existing, modern tools used in e-business in the aspect of increasing the coverage and sales of the different products and services, with special reference to recognition of a specific brand. The authors attempt to present business model solutions of a selected service offered by an e-business which is a Polish leader in e-shop software, as well as resources of good practices defining how to act to provide services in an optimal way using IT communication.

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Keywords: information management; e-business; information and communication technologies; virtual enterprise management

1. Introduction

The term e-business signifies a business management method using IT communication, mainly Internet applications. E-business refers, among other things, to sending documents, exchanging data between a producer, distributor and trade partner, winning new customers, conquering markets, and holding teleconferences. E-business comprises[1]:

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- e-commerce,
- e-enterprise,
- e-economy,
- e-society,
- e-government,
- e-banking,
- e-learning

Currently, the term e-business may be used in a number of contexts. First: e-business may constitute an element of an enterprise management strategy consisting in the use of solutions designed to increase an enterprise's competitiveness[2]. In such a case, companies may conduct part of their activity on-line, or use technology to improve internal or external information exchange. Second: e-business is a model of an enterprise that operates mainly on the Internet, limiting to minimum its "physical" presence on the market or traditional customer service[3].

Broadband network is regarded as the basic infrastructure of the modern knowledge-based economy, therefore it should be at the centre of attention of all countries that want to compete on the global market[4].

2. E-business and its environment

The environment of an e-business, just as in the case of a traditional enterprise, can be divided into[5]:

- near environment, or micro-environment, which consists of suppliers of materials or raw materials, intermediaries, competitors and customers;
- far environment, or macro-environment, which includes factors that are independent from an enterprise and affect its operation in technical, standardisation, legal, social, economic, political and educational aspects.

In the case of an e-business, contrary to traditional enterprises, there are no boundaries connected with the environment. Customers, suppliers and intermediaries may be located at any place across the world, in different time zones, they may speak different languages and pay in different currencies. What is more important from the e-business environment perspective, is relationships between the different entities of e-business. The most popular of them include[6]:

- B2B – *business to business*, i.e. relationships between two businesses taking place during wholesale and trade between different companies and within one company, between its branches. B2B development requires increasing integration of business processes between entities.
- B2C – *business to consumer*, i.e. relationships between an enterprise and its consumers in the area of offering information, goods and services online to individuals through online shopping centres. They may also include online banking services via which customers make bank wire transfers.
- C2C – *consumer to consumer*, relationship based on business connections between end consumers of a service or product, such as auctions, classified ads or exchange of new and second-hand things.
- B2A – *business to administration*, i.e. relationships between business and administration, understood as companies' actions towards public sector organisations, aimed at using electronic technology for information exchange between a company and public administration, e.g. in the area of taxes or employment. This form also includes electronic reporting systems.
- C2A – *citizen to administration* – communication between citizens and public authorities allowing the former to settle important or obligatory matters through electronic contact, e.g. online submission of tax returns, submission of an application for a passport or an identity card.
- C2B – *consumer to business*, i.e. a model that is the opposite of B2C, used by portals that allow an individual person to publish an offer addressed to multiple sellers. Sellers may view offers and take responsibility for them.
- F2B – *finance to business*, i.e. offering by financial institutions of their services to companies using the Internet; and F2C – finance to consumer – relationships between financial institutions and individual customers.
- B2E – *business to employee* – use of electronic means of communication to communicate with employees - e.g. the Intranet, remote working.

4. Business model

E-business models answer the question of how a company is going to generate revenue and ensure itself profits from online operations.

A business model[7] should specify benefits for a customer, scope of the offer, price policy, ways of implementing the model, sources of income and fundamental skills of a company. With rapid development of electronic business, the range of existing business models grew. At the beginning, e-business included e-shops or e-orders which reflected the traditional way of conducting business activity. Over time, more innovative models appeared and started to evolve towards virtual markets or networking in which dynamic and short-term relationships between producers and consumers dominate.

Classification of business models varies. The three main business models which are the most popular forms of earning money via the Internet are: advertising, agency and e-commerce[8] .

The more detailed review of e-business models developed by Dariusz Nojszewski[9] includes not only an e-shop designed to sell goods and services via Internet, but also e-procurement that allows offers to be placed online and an enterprise to be supplied with goods and services. He also distinguishes e-auctions that enable bidding and purchase of goods and services, and e-mall, which is a variant of e-shop consisting of a number of e-shops. Virtual community comprises online services concentrated around a certain subject or sector of services available online, and a supplier of value chain services delivers specific services from the value chain – e.g. e-payments or logistics service. Nojszewski also mentions collaboration platform which provides tools and creates IT environment that enables cooperation between companies. He also distinguishes information brokerage as a way of offering services of searching for and supplying needed information to customers, e.g. searching for information on the Web, creating customer profiles, and trust services, understood as provision of specific information guaranteeing trust in online business processes in the form of authenticity certificates or data encryption. Making applications available through the Internet, i.e. offering software available on the Internet and charging fees for use of such software is also one of e-business models

Nojszewski also distinguishes the model of a broker that contacts sellers and purchasers with each other to enter into transactions and charges fees for operations performed to allow transactions to be executed, e.g. in online travel agencies or auction services, a model of a dealer implemented in the form of a trade company operating on the Internet, selling goods and services online, and a model of a direct producer that reaches its customers directly via the Internet omitting traditional distribution channels. Further, he mentions a subscription model which charges fees for access to resources of a service or offers publically available content or content accessible only to subscribers, and a utility model, where fees are charged for actual use of the service.

His review also includes a supplier with a full range of services that offers not only its own goods and services, but also products of other similar companies, a content provider, that provides content to larger or more general portals, and infrastructure provider, that provides infrastructure in the form network connections, wireless technologies and software to allow other entities to operate in e-business. Other models include common infrastructure, i.e. an Internet service gathering offers of market competitors, e-commerce platform, which offers a whole range of services covering the whole process of carrying out commercial transactions from negotiations to delivery of goods, and commercial communities, which ensure a source of information and communication necessary for operating in a given business.

Finally, there is a model of an aggregator of customers which gathers a great number of independent customers allowing them to achieve a better price, offered only to wholesalers, a distribution model that connects large groups of producers with wholesalers and retailers, a portal (general, universal) in the form of a website containing a wide range of information and services, and a vortal – a kind of a portal containing detailed information about a specific industry.

3. E-business strategies

Due to increasing number of e-businesses, it is more and more difficult to achieve success on the Internet. Therefore, especially in e-business it is important to have an appropriate business strategy - without it even the best idea cannot be implemented[10].

Errors that are most often made when developing strategies for e-business[11] include incorrect forecasts and analyses resulting from originators' and e-business creators' failure to check whether their idea will attract interest of potential customers and incorrect estimate of finances without taking into account additional financing sources that would allow the company to develop in the initial period when it does not attract sufficient interest of customers[12].

When developing a strategy for e-business it is important whether the brand will be an entity operating only online or whether it will be an online representation of a brand that functions on the market in the traditional form. Undoubtedly, the best strategies for e-businesses will be those based on e-marketing, i.e. marketing operations conducted on the Internet. For that purpose, e-business tools presented in fig. 1 can be used.

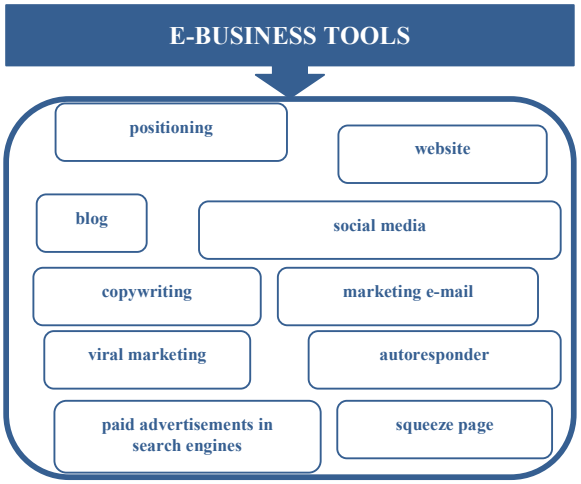

Fig. 1. The most popular e-business tools

There are a great number of e-business tools, and selection of those that can be used by an entrepreneur depends on specificity of a given e-business.

A website is now an obligatory investment of every company - not only one that operates online. This is the best and fastest tool that can be used by an entrepreneur to inform and educate customers, and present and sell its products and services to them. The most important functions of a website include promotion of a company or its specific product, raising brand awareness, activating new customers and building loyalty of the existing customers and main or additional distribution channel[13].

Blog. i.e. a diary that is kept online and includes content of interest for readers, plays an important role in providing possibility of commenting specific content and interaction between a company and its customers. Blogs may also fulfil a role of image creator as they present the institution as an industry leader, as well as an educational function (blogs discussing financial issues run by financial institutions)[14].

The aim of search engine positioning is to achieve the highest possible position in search engine results, taking into account specific keywords. This tool is very effective and at the same time relatively cheap, and a high position in search engine results in increased interest in a given offer. This is because Internet users who search for a product or some information on the Internet often click the first few links displayed in the search engine[15].

Another e-business tool is social media, which have been very popular recently. By promoting their products or brands in such services as Facebook, Twitter, Google+ or YouTube, companies can use social relations to strengthen their image. Social media users often recommend interesting content to their friends and share their opinions about products and services of a given brand[16].

E-mail marketing is regarded as the cheapest and at the same time most effective e-marketing tool. It involves communication with customers via e-mail, creation and analysis of an e-mail database and preparation of the content of messages to be sent. The most important advantages of e-mail marketing include, among other things: measurability (it is known how many e-mails have been sent, read, and what interested whom), immediacy (it takes

a few seconds to send an e-mail, and a return message can be received instantly), scalability (this form can be used by both small and large companies, and an e-mail can be sent to several hundred or even several million recipients), relevance (thanks to information about recipients' activity, subsequent e-mails can be suited to their interests) and savings (cost of sending an e-mail is much lower than in the case of paper letters)[17].

Autoresponder is regarded as a very important instrument supporting e-business. It is software that sends automatic e-mails to people who wrote an e-mail to a company. Autoresponder can send a single e-mail or scheduled e-mails every few days. It can be used to publish a newsletter or e-mail courses and to advertise products. It ensures continuous contact with customers, contributes to image-building and enables customer education[18].

Squeeze page is also called a capturing page. This is a very simple page devoid of advertisements or other unnecessary elements that may distract attention. After entering such a page, the visitor may provide his/her e-mail address or leave the page. The main aim of a squeeze page is to capture the e-mail address of the visitor to the page, it can also be used to sell products – usually information products, e-books, courses or computer programmes. It can be used in combination with the autoresponer connected with it[19].

The most popular system of paid advertising in search engine is Google AdWords functioning in Google browser. An entrepreneur can create an advertisement by himself and select keywords related with its company or its business profile. Once the advertisement is created, a sponsored link is displayed in Google search results and on partner websites. The advertisement reaches a customer when he searches the Internet for products related with the company's business and indicated key words. This tool makes it possible to precisely plan the advertising campaign budget and find out which elements of the advertisement work and which don't. Advantages of using this tool include complete control over campaigns, direct redirection to the company's website and a payment system which is based not on displaying an ad but clicks on it[20].

Viral marketing - takes advantage of the social character of the Internet and Internet users' tendency to share with others what they find funny, interesting or shocking. The task of marketing specialists is to prepare material that is interesting enough to be appealing to Internet users - and the latter will spread it and "infect" their friends with it. A well-thought-out viral campaign that uses a funny and surprising advertising material enables a permanent image of brand to be built at a wide scale[21].

An appropriately prepared strategy for e-business and tools that are well-suited to the specificity of this type of business, as well as their skilful use, have a positive impact on an enterprise's success.

Running a virtual enterprise entails both numerous advantages and disadvantages. Unquestionable advantages include: flexibility of this type of an organisation and its ability to adapt itself o changeable situations, optimisation of the value chain of production and distribution, high productivity at low operating expenses, time savings and increasingly smooth operation.

Disadvantages of a virtual enterprise include possibility of power abuse by the different partners, problems with employee identification or evolution towards short-term contracts concluded between partners with very attractive competences[22]. A disadvantage may also be credibility of an institution which cannot be localised in the “real world”, and lack of uniform customs and tax rules worldwide.

In January this year, a survey was carried out on the basis of questionnaires distributed among surveyed enterprise customers. They were responded by 50 adults using the platform at least once. The question of: Are you satisfied with customer service quality at surveyed enterprise was replied at 65% as YES and 28% as NO, while 7% of the respondents never used customer service.

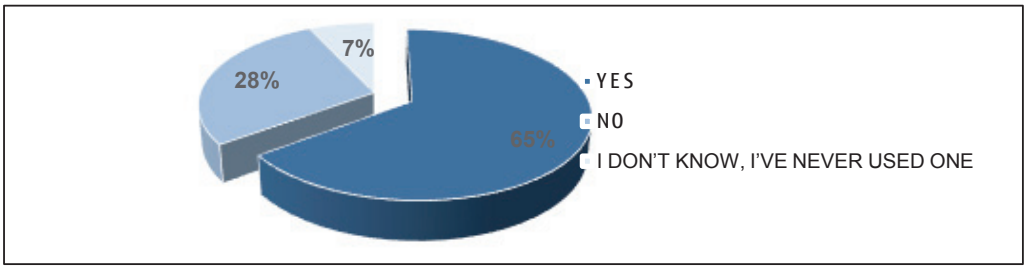

Diagram 1. Are you satisfied with customer service quality at surveyed enterprise

While asked 'Would you like surveyed enterprise to implement more opportunities to contact customer service', majority of respondents answered positively. Merely 10% of them claimed that previous means of contact with customer service suits them perfectly.

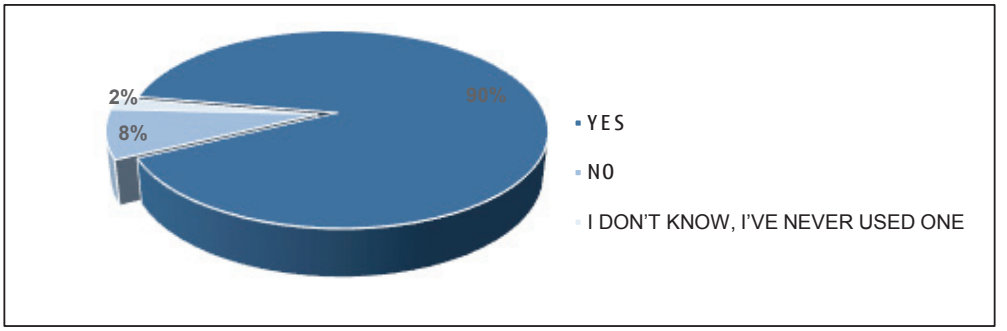

Diagram 2. Would you like surveyed enterprise to implement more opportunities to contact customer service

The survey also included the question of implementation of other means of contact with surveyed enterprise employees, i.e. 'How would you like to contact surveyed enterprise Customer Service Department'.

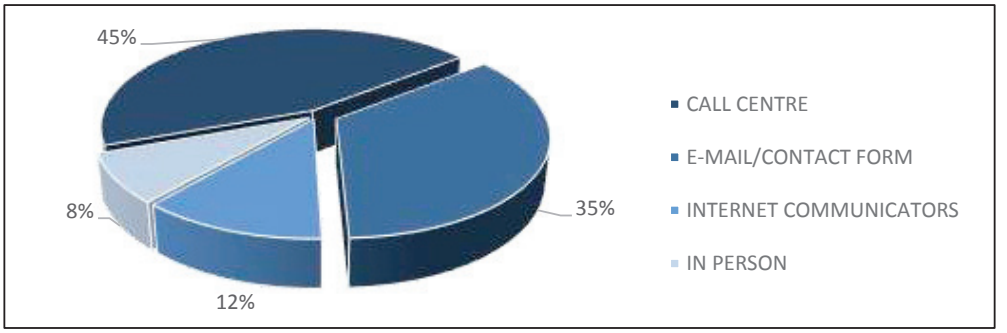

Diagram 3. How would you like to contact surveyed enterprise Customer Service Department'

The results of the survey clearly show that persons who use surveyed enterprise would like to have more opportunities to contact customer service. They would rather contact them by the phone, which considerably shortens response time. User often send queries to trivial problems (e.g. the information which is to be easily found at the webpage), clogging the work of many people. Surveyed enterprise definitely ignores pressure from users.

Concluding the theoretical part, it should be stressed that e-enterprises constitute an integral part of e-business[23]. Discussing the current e-business tools, the authors paid special attention to the issue of whether enterprises operating online possess a business plan aimed at creating an appropriate strategy supporting the competitiveness of the enterprise as well as at winning as many customers as possible and making profit.

4. Business model of a selected service of an e-enterprise

The e-enterprise analysed is a company specialising in services for e-business, especially in the area of software for online shops, offering the most advanced software designed to run e-shop. The most important features of this software include a powerful system for integration with external systems, other services and programmes for full

automation of logistic processes. The software offers a range of integrations: with warehouses, auction service, price comparison websites, shopping malls, online payment systems, courier services, software for issuing invoices and other.

Fig. 2. Integration of e-shop with online warehouses

Software for running online shops

Software for online shops includes in its offer an innovative service which provides unlimited possibilities of selling products without the necessity of their storage.

This option is mainly intended for sellers that value time and convenience and often allows them to save several thousand Polish zlotys. This new service makes it possible to include new items in the offer of an e-shop in a simple way or quickly start online sale, using products made available by large warehouses from various industries.

The most important advantages of the system for integrating e-shop with a warehouse include:

- automatic transfer of complete information about products to e-shop,
- automatic updates of the offer,
- possibility of entering tens of thousands of finished products to choose from within a few minutes.

INTEGRATION WITH WAREHOUSES

Company name	xxx
Map the warehouse category	⊙
Define the default category	O ▼
Mark-up	xxx
Tax included into the price	xxx ▼
Link to an XML file	xxx

Id	Company name	Action	Read HTML file

Warehouse category	Shop category	Mark-up (%)	Tax included into the price

Fig. 3. Service of integration with warehouses

This option allows a full product offer to be transferred to an e-shop, containing product names, detailed descriptions, photos, warehouse stock, prices and other data depending on the information sent by warehouses.

The software enables connection of an e-shop with almost every warehouse, provided that an appropriate XML or CSV file is received and appropriate configuration is made in the e-shop.

Integration in e-shop means thousands of products updated on an ongoing basis within a few minutes. Cost-effectiveness of running e-shop without integration with a warehouse is impossible, as it may take about a week's work to enter around 1000 products, and updating prices, stock levels or information about product availability requires employing an additional person.

This platform is fully integrated with the service Allegro.pl, and it is a two-way integration. Products from the e-shop can be easily put up and sold at auctions on Allegro.pl. Sold products are subtracted from the e-shop's stock levels, and customers from Allegro.pl are added to the e-shop's database. This ensures full control of the functioning of the e-shop.

Another important element in an e-shop with two-way integration with Allegro pl is automatic end of an auction after all products are sold. The process of putting a product for auction is much faster than through Allegro.pl. It is enough to configure an auction template once in an e-shop to be able to put products for auction at one click. The software for e-shop also has an option to automatically reopen an auction and to open it at a specific date.

There is also no need to contact the customer after the auction ends to discuss delivery details. This solution offers huge convenience and saves sellers' time. The e-shop takes over customer service after the auction ends, as all processes are automated.

As auction templates are integrated with an e-shop, and graphic files are hosted on a server where the e-shop is maintained, there is no need for additional hosting for an auction template or additional photos of a product.

In the administrative panel of the e-shop, an item is selected from a list and then put up for auction on Allegro.pl by clicking the “Allegro” button. A complete description is automatically downloaded from the e-shop along with photos stored in the e-shop and automatically added to the template from Allegro, integrated with the e-shop. Before a product is put up for auction on Allegro.pl, it is possible to change its description. What's important from the perspective of the seller, the description doesn't have to be identical with that in the e-shop.

The product description for the e-shop can be easily entered by means of HTML editors without knowledge of HTML codes. An unlimited number of photos can be placed and additionally described under each product. All data about an Allegro.pl user is added to the database of the e-shop, which takes over customer service after the auction is completed, as all processes are automated. Customers of Allegro automatically become customers of the e-shop. Moreover, a customer receives an automatic notification from the e-shop's system about entering the payment into the accounts and shipping the delivery, receives a VAT invoice to an e-mail, etc.

One of the advantages of a two-way integration of an e-shop with Allegro.pl is the fact that a product together with its description and photos is entered into an e-shop only once. It should be also stressed that a product is put up at online auctions from the position of an e-shop, and the full description and all photos are automatically taken and pasted to an auction template, which ensures highly professional appearance and an unlimited number of large photos in the description without using HTML codes, links, placing photos on an external server, etc.

Control over stock levels is another positive aspect of such integration, as a product bought on Allegro is subtracted from stock levels of an e-shop.

It is also worth mentioning such issues as time saved on such actions as: issuing VAT invoices, filling in a mail sent log and labels for parcels, contacting customers, informing a customer about the status of an order, tracking number or entering payment for goods into an account. These time savings are ensured by highly specialised modules of an application for e-shop.

Summing up, thanks to integration with Allegro.pl, a product together with its description, photos, an image gallery, a gallery of ongoing auctions, and a gallery of finished auctions is copied into an auction template and put up on Allegro.pl service at a click, and the owner of an e-shop doesn’t pay for additional photos. Stock levels will be easily controlled, as orders placed via Allegro.pl service will be automatically added to the e-shop's orders. Products sold on Allegro will reduce stock levels at the e-shop. When an e-shop runs out of a product, the auction on Allegro.pl will automatically end. Additionally, customers from Allegro.pl automatically become customers of an e-shop.

The software presented also has unlimited possibilities of integration with price comparison websites, e-malls and e-Centres.

Thanks to the software used by the company analysed, integration with price comparison websites enables promotion of the offer of a given shop.

Ceneo.pl is a website designed to compare prices of goods available on the Polish Internet. It is the most popular price comparison website. Every month it is visited by around 5 million customers. By presenting his offer on Ceneo, the user of this price comparison website invests in sales increase, as it increases the interest in this offer, which leads to increase in the number of orders. Every tear Ceneo rewards e-shops that received the best marks from customers as part of the programme Trusted opinions.

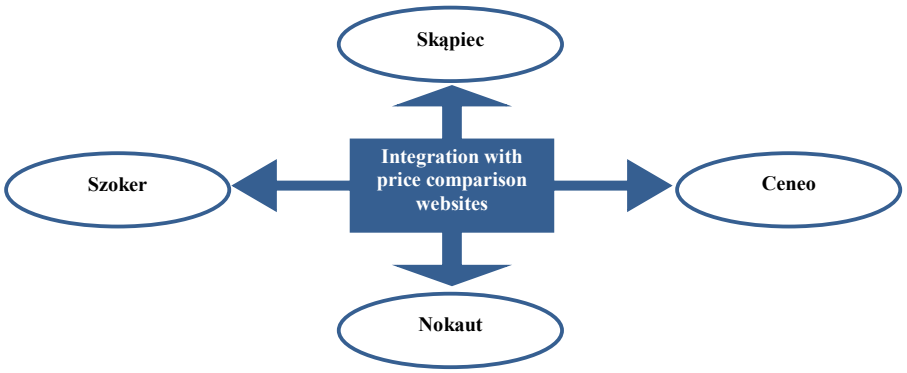

Fig. 4. Integration with popular price comparison websites

Nokaut.pl is second largest price comparison website in Poland. Every month it is visited by almost 3 million Internet users. Thanks to Nokaut, every offer is also available on mobile devices of people who use Nokaut Skaner application or the mobile version of the service.

The Skąpiec price comparison website allows not only offers to be viewed in terms of the best price of a product, but also e-shops and products to be evaluated. Skąpiec is the third most popular price comparison website in Poland.

Schoker.pl is a free-of-charge service designed to compare shops, and an e-mall. Each section represents a separate industry specialising in its area. It offers presentation of products and opinions about products and shops. It also offers a ranking of shops and a ranking of products.

Integration with e-malls

Thanks to integration with e-malls, products from an e-shop are automatically added to services. The only thing that should be done is to sign up in this service and add a link to an XML file with the offer of an e-shop.

E-shops of this platform are prepared for secure electronic payments, i.e. instant transfers and payment with a credit card. Electronic payments represent an important factor influencing the level of turnover of an e-shop. The bigger the number of options a customer can choose from - cash payment on delivery, payment by bank transfer, electronic payment or payment with a credit card, the bigger the chance that he will find his preferred form of payment and do shopping in a specific e-shop.

Electronic payments are becoming increasingly popular among customers of e-shops. Thanks to a broad offer of online banking, more and more customers can pay online for products they purchased. Processing electronic payments in an e-shop is an important aspect, determining sales effectiveness and level.

Customers may very quickly pay for the order they placed, practically from every bank. E-shop software offers integration with hire-purchase systems.

The software used by the e-shop analysed makes it possible to calculate delivery costs based on the product's weigh or price, define a list of delivery countries or choose a delivery country. Its tools offer, among other things, the possibility to define the scopes of measurement units and costs, payment methods for each supplier, or new periods of the availability of goods.

E-shop software guarantees instruments for integration with courier services and services that act as an agent in servicing courier services.

Integration with courier systems maximally simplifies processes of placing orders, pro-vides possibility of fast and secure pay-ment for a service, assistance of a consult-ant and ensures that the courier company assumes responsibility if there are any prob-lems with the shipment. Moreover, some services offer such mechanisms as: dis-counts for shops, searching tools for postal codes, possibility of tracking the shipment and many others.

5. Summary

The main task of e-business is to execute transactions between trade partners in the online mode, with information being the main subject of the purchase and sale.

Incorrect cost calculation and excessive haste during starting up e-business refer in particular to new ideas, as it is difficult to predict at this stage whether the technology used will work with a new solution.

Other frequently made errors include ineffective marketing and promotion expressed in conducting advertising campaigns without a thought-out plan or analyses, and failure to appropriately secure transactions, i.e. use secure protocols during e-transactions. There are also technological, functional and aesthetic errors, caused by the use of inappropriate technologies, anaesthetic presentation of the offer or underdeveloped ergonomics of the service.

Failure to integrate e-business with other channels and tools designed to support sale and inability to keep customers and build positive relationships and bonds with them, and inadequate planning resulting from inappropriate research of the competition market, group of target customers or offered products also have a negative impact on building an e-business strategy.

Running a virtual enterprise entails both numerous advantages and disadvantages. Unquestionable advantages include flexibility of such an organisation and its ability to adapt itself to changeable situations, and optimisation of the value chain of production and distribution, high productivity at low operating expenses, time savings and increasingly smooth operation.

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